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Maine Waste Management : 20 Years of Progress

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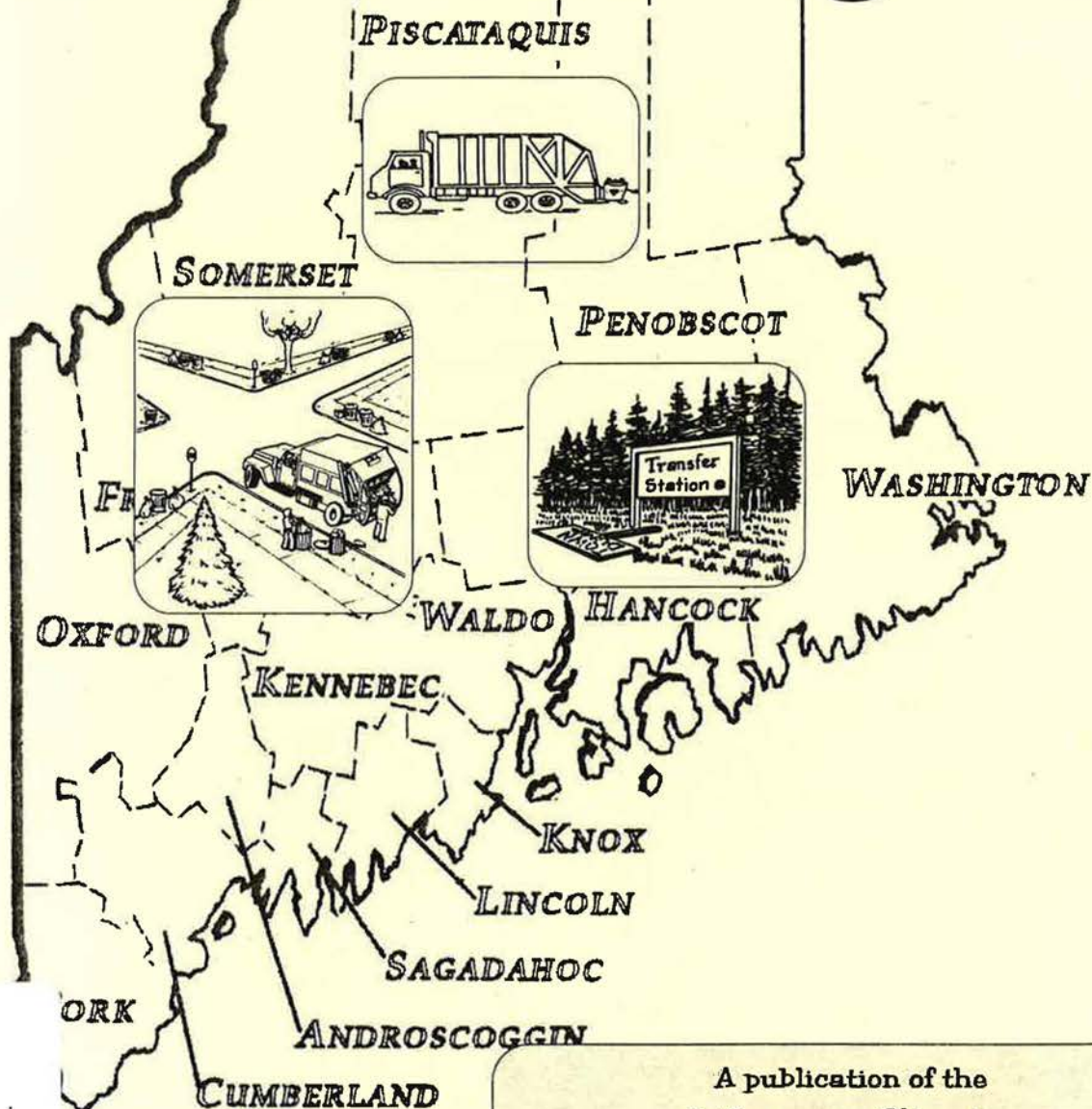
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Maine Waste Management 20 Years of Progress



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In June 1995, after six productive and eventful years, the Legislature closed the Maine Waste Management Agency, transferring some of its functions and responsibilities to the State Planning Office. This occasion provides an opportunity to review the history, accomplishments and future direction of waste management in Maine.

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The following staff contributed to the preparation of this document:

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*This publication is respectfully dedicated to:
Sherry Huber
Executive Director of the Maine Waste Management Agency
1989-1995.*

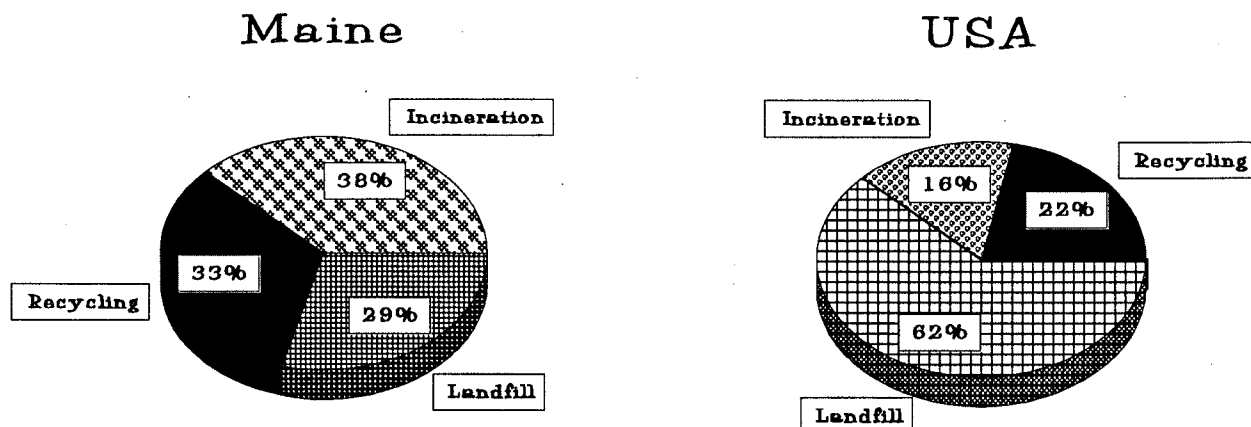


An Achievement All Mainers Share!

In less than two decades, Maine has transformed a waste management system, little changed since colonial times, into a national model of both environmental sensitivity and economic sensibility. TODAY, MAINE IS A NATIONAL LEADER IN WASTE MANAGEMENT. As Figure 1 below demonstrates, Maine far exceeds the nation in recycling and in reducing our dependence on the costly and environmentally less desirable land disposal alternative.

Maine benefits greatly from the efforts undertaken in recent years, but the job is not complete. This publication celebrates this achievement, highlights specific accomplishments and identifies what remains to be done!

Figure 1. Solid Waste Management:
Maine vs. USA



Highlights

- ★ 137 Maine communities exceeded a 35 percent recycling rate in 1994.
- ★ Recycling is now available in 415 Maine cities and towns serving 95 percent of the state's population.
- ★ Recycling has become a \$1.6 billion sector of Maine's economy, responsible for an estimated 8,100 jobs or 8.3 percent of all manufacturing jobs in Maine. Business has invested tens of millions of dollars in new plants, equipment and worker training to take advantage of the booming markets in products manufactured from recycled materials.
- ★ From over 400 dumps in the early 70s, Maine now has only nine municipal solid waste landfills, all operating under strict licensing standards. By following an integrated approach to waste management, Maine has reduced its dependence upon land disposal from 38 percent of all municipal solid waste in 1988 to 29 percent in 1994.
- ★ The state has purchased a site and applied for permits for a safe, secure special waste disposal facility.



History

Twenty years ago, solid waste was a public health hazard and an environmental menace in Maine. Nearly 400 dumps marred the landscape, most burning openly; many polluting our surface and ground waters. Bottles and cans littered our highways. School, church and civic groups occasionally conducted bottle drives or collected bundled newspapers to raise a little cash. But, for the most part, though, materials piled higher and higher in town dumps.

The situation in Maine was no worse than elsewhere in the nation. The major difference was that Maine people were not content to accept such an unsavory status quo. After all, in the 1960s, they had led the nation restoring water quality to Maine's rivers, lakes and streams, demonstrating that clean water was beneficial to both the state's environment and its economy. Beginning in the mid-1970s, they began to address waste management with the same resolution and sensibility.

- ✓ During the 1970s, the Maine Legislature enacted the first restrictions against open burning and specified landfill siting and operation procedures designed to prevent pollution of surface and ground water.
- ✓ In 1976, Mainers were the first in the nation to pass a referendum requiring deposits on beverage containers to deter littering and to encourage their reuse and recycling.
- ✓ Throughout the 1980s, the Legislature further refined waste management laws and began to offer communities incentives and assistance with closing old dumps and adopting wiser waste management practices.

All of these initiatives were the prelude to some of Maine's most significant waste management accomplishments.



Maine Enacts Landmark Waste Management Law

In 1989, Maine enacted the most far-reaching recycling and solid waste law in the nation. It established ambitious waste management goals and challenged Maine people to work together to meet them. It instituted both incentives, in the form of credits and grants, and disincentives, in the form of deposits and fees, to encourage appropriate waste management practices. It provided tools in the form of grants, loans and technical assistance to further these principles. Since then, Maine government at all levels, businesses both large and small, and citizens from our smallest towns to our biggest cities have worked tirelessly to make this law work.

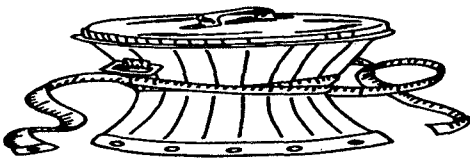


Maine Waste Management Agency Established

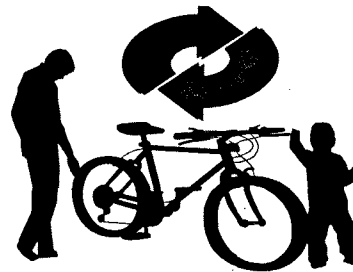
To oversee implementation of the new law, conduct solid waste management planning, provide assistance to businesses and municipalities and address statewide solid waste management issues, the Legislature established the Maine Waste Management Agency (MWMA). Over the past six years, the MWMA worked with businesses, communities and the general public to assure that the Legislature's objectives for Maine's ambitious waste management law were met.

The 1989 law established a hierarchy of Maine waste management priorities, in order, as follows:

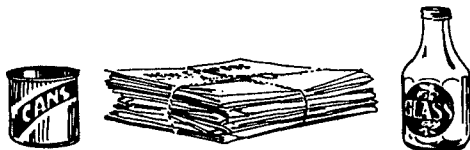
① WASTE REDUCTION



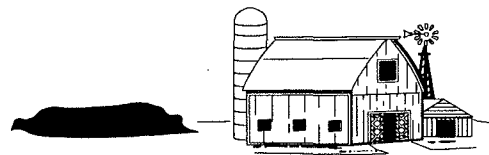
② REUSE



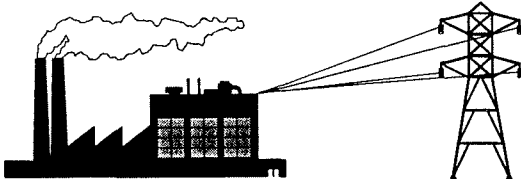
③ RECYCLING



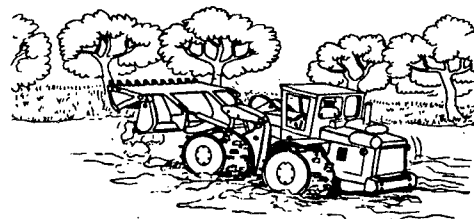
④ COMPOSTING

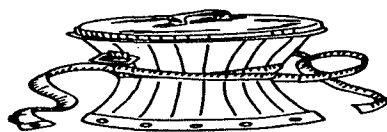


⑤ INCINERATION & WASTE-TO-ENERGY



⑥ LAND DISPOSAL





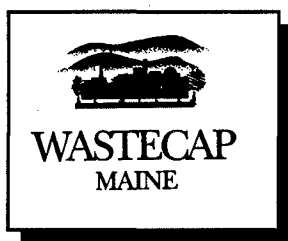
WASTE REDUCTION

Maine's citizens have long recognized that the most effective way to manage waste is to prevent it in the first place. By averting waste generation, the need to manage and dispose of it is avoided as well. Hence, Mainers determined that the most sensible top priority is waste reduction. And over the past six years, several important steps have been taken to dramatically change wasteful habits.

In its state plan, the MWMA established an ambitious goal to reduce municipal solid waste in Maine 10 percent by 1994. Maine people actually surpassed that goal in 1992, due partly to the reduced economic activity accompanying the recession. Yet, even as the economy has recovered in recent years, waste generation levels have stabilized.

The MWMA conducted a variety of programs that encourage waste reduction and reuse, including:

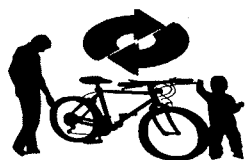
✓ *WasteCap* provides Maine businesses free, on-site waste assessments to identify changes in production and materials handling that can reduce waste. Since 1990, the MWMA has



coordinated assessments at over 120 commercial, industrial and institutional facilities across Maine.

✓ The *Toxic Use Reduction in Packaging Program*, established by the Legislature in 1990, required packaging manufacturers and distributors to limit the amount of heavy metals to 250 parts per million (ppm) by April 1, 1993 and then to 100 ppm by April 1, 1994. Both deadlines passed with most businesses in full compliance. Fourteen other states have enacted similar laws.

✓ Through the *Model Business/Community Program*, businesses, schools, civic organizations and other groups serve as examples of good waste management practices and models for others in the community to follow. Since 1991, the MWMA assisted a dozen cities and towns to initiate a Model Community Program.



REUSE

Maine people know that items that can be reused usually make a lot more sense to their budgets and to the environment than those designed to be used once and discarded.

Maine people also appreciate that what may be one person or firm's waste is often a resource to some other person or firm. Whether it is baby clothes passed along to a neighbor or Bath Iron Works selling its sandblast grit to paving contractors, Mainers have found countless innovative ways to make the items they purchase last longer or to reuse the materials they contain.

✓ In 1991, Maine's two largest grocery chains inaugurated a rebate for the reuse

of shopping bags and reusable canvas bags. In 1991, store *BYOBag Rebate Programs* paid out refunds for over five million bags statewide.



Advertisers and consumers alike have learned the importance of terms like product life and durability, and recognize that wise purchasing is sensible to both the economy and the environment.

✓ The MWMA also worked with Maine municipalities to implement reuse programs ranging from "drop-off" areas to "bargain barns" for reusable items at the community transfer station or recycling center. Statewide, communities reported over 1,400 tons of such materials were reused in 1993.

✓ MWMA encouraged innovative reuse initiatives. For example, MWMA helped the Cumberland County Affordable Housing Venture to expand its *Building Materials Bank* in Gray. This program stores reusable construction and demolition debris, and makes it available to low income residents for building and refurbishing projects.

✓ But it has been in the area of *Consumer Education* that the MWMA's efforts perhaps had their most pervasive effect. Through workshops and a media advertising campaign, MWMA

encouraged the public to adopt a "waste wise" lifestyle, especially when shopping. As a result, Maine merchants find that



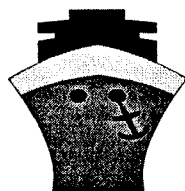
MWMA promotes "waste wise" habits through posters and other media.

consumers increasingly demand durability from and recovered material content in the products they buy. Indeed, many Maine advertisers have learned the value of promoting the recycled content and other "waste wise" aspects of their merchandise.



Maine Businesses Profit from Waste Reduction & Reuse Efforts

During the 1990s, Maine businesses also discovered that waste reduction and reuse make good sense for their balance sheets. All over Maine, businesses large and small examined their operations and implemented innovative procedures to reduce waste generation, increase recycling and realize tremendous savings that improved profits while enhancing the environment. The profiles below represent a cross-section of examples of how businesses have undertaken innovative waste reduction and reuse efforts.

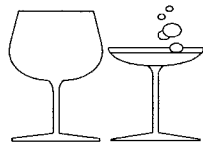


Bath Iron Works

In 1990, Bath Iron Works (BIW), Maine's largest private employer, undertook an intensive study of the

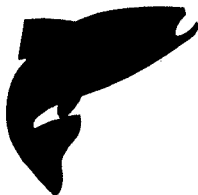
wastes the company generates and implemented a tracking and reduction program in January of 1991. In the first year, BIW reduced its waste by 42 percent and realized \$5.5 million in savings from avoided disposal fees and the reuse or sale of items previously discarded. By 1993, BIW had

cut its wastes by 57 percent and was saving over \$10 million annually.



You Know Whose Pub

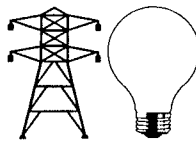
The staff and management of this popular Waterville restaurant work to reduce their waste. When shopping, they use cloth bags; food scraps go to local pig farmers for feed; procurement of napkins, bathroom tissue, and hand towels stresses post-consumer recycled content. The tavern even promotes the sale of draft beer as an economically and environmentally thriftier alternative for its customers.



Ducktrap River Fish Farm, Inc.

This Belfast-based national mail-order distributor has significantly reduced the packaging used for its salmon and trout fillet products, instructed its vendors verbally and in writing that it requires as environmentally safe a product as possible; and installed controls for its HVAC and refrigeration systems to increase energy-efficiency.

The company reuses 100 percent of raw fish waste as bait, and used salt dry brine into the City of Belfast's road salt supply. Ducktrap River also donated about 750 pounds of overstocked items to Stone Soup Kitchen. To promote environmental awareness, Ducktrap River maintains a toll-free phone number to call for information about recycling, and prints this number on product boxes.



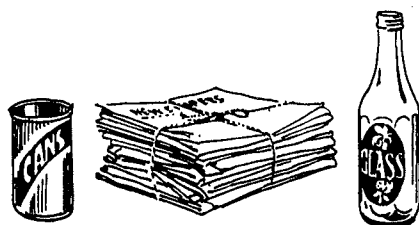
Central Maine Power Company

During 1994, Maine's largest utility established a Reduce-Reuse-Recycle (3-R) Team to coordinate waste reduction efforts at all major facilities and investigate possibilities for cost savings. Team members exchange information about waste reduction programs currently in place at CMP's facilities and develop new ideas for future efforts.

CMP's paper waste reduction efforts include elimination of 44 types of multi-part forms, chipping 36 tons of wood debris for landscaping and biomass fuel; and converting hydroelectric plant equipment to use vegetable oil-based hydraulic fluid and greases. In 1995, CMP hopes to beat its 1994 waste reduction totals by 10 per cent.



Businesses throughout Maine proudly display this logo to alert customers to the benefits of recycling efforts.

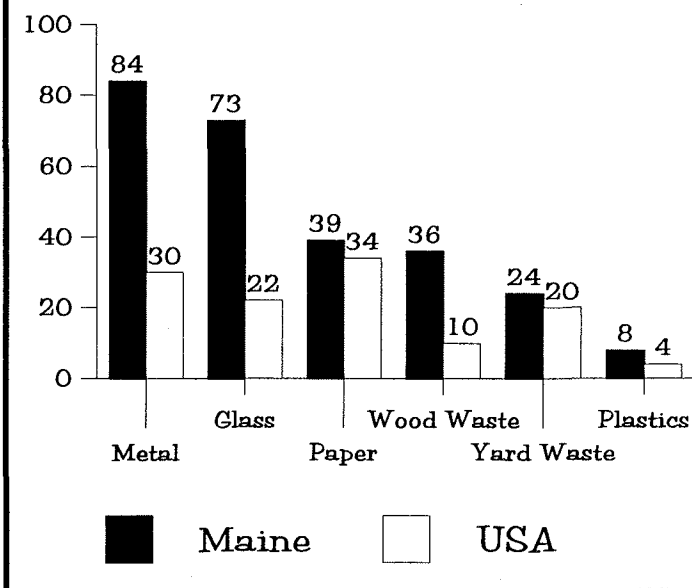


RECYCLING

Clearly, the greatest challenge of the 1989 Maine Solid Waste Management Act was the ambitious goals it set for recycling in Maine: 25 percent of municipal solid waste statewide by 1992 and 50 percent by 1994.

Although Maine actually surpassed the 1992 goal a year ahead of time, the 1994 goal has proven more elusive. Maine has emerged as a national recycling leader, far surpassing the recycling rates of the nation as a whole (see Figure 2, above).

Figure 2. Materials Recycling % Rates, Maine vs. USA, 1993



Who's Recycling What in Maine

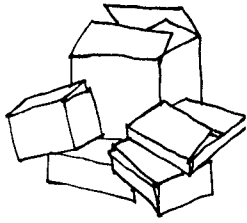
In 1993, Maine people recycled one-third of the municipal solid waste generated. Table 1, below, presents figures for recycling by categories. While clearly remarkable progress has been achieved recycling several critical elements of the waste stream- most notably glass and metal -much remains to be done in other areas- most notably plastics and organic materials. The illustrations on page 8 provide even more specific information on what Mainers are currently recycling.

Table 1. Recycling in Maine (1993)

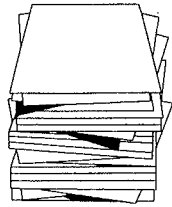
MATERIAL	GENERATED (TONS)	RECYCLED (TONS)	RECYCLING (%) RATE
PAPER	476,188	184,670	37.1
METAL	127,893	107,540	84.1
GLASS	53,511	39,272	73.4
PLASTIC	78,623	6,515	8.3
TEXTILES	21,833	257	1.2
ORGANIC	319,917	40,102	12.5
"HARD TO MANAGE"	215,436	48,285	22.4
TOTAL	1,293,401	426,641	33.0

Source: Reports MWMA receives from businesses and municipalities.

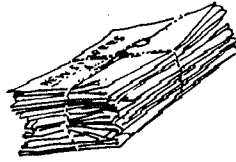
Paper



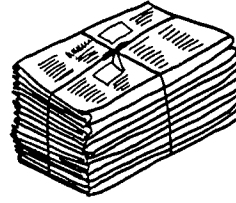
Corrugated
Cardboard
67,964 tons



High Grade
34,763 tons



Magazines
5,477 tons

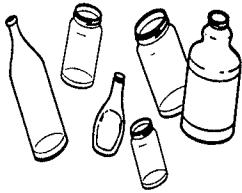


Newspapers
24,117 tons

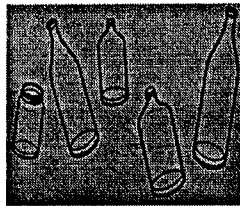


Mixed
52,349 tons

Glass



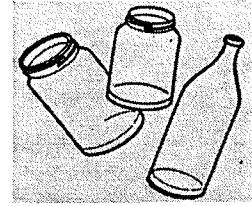
Clear
17,045 tons



Green
9,375 tons

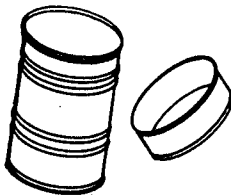


Amber
11,648 tons



Mixed Color
1,204 tons

Metals

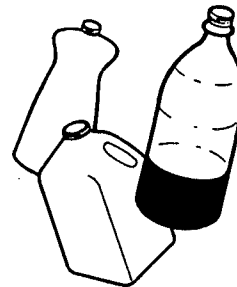


Ferrous
98,747 tons



Non-Ferrous
8,793 tons

Plastic



Plastics
6,515 tons

Source: Figures are for 1993, as reported to the Maine Waste Management Agency

Much of the credit for Maine's tremendous success recycling glass and metal is due to the state's "bottle bill." Today, Mainers annually buy more than half a billion beverage containers and return over 95 percent of them.

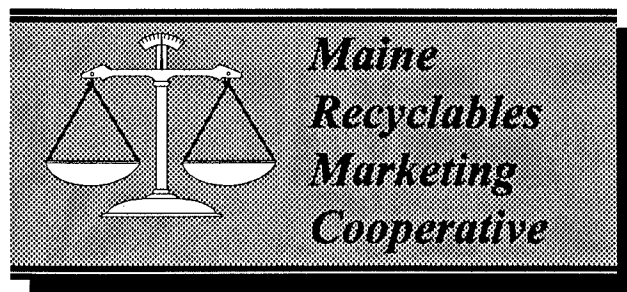
However, the real story underlying Maine's recycling

success is in the tremendous efforts undertaken at the local level. Today, Maine has 415 municipal programs, up from only 60 in 1988. Recycling is now available to 95 percent of the state's residents. The following three pages highlight programs that encourage recycling and some of the state's municipal success stories.

Programs Encourage Recycling Efforts

✓ To further recycling efforts, MWMA worked with the Maine Resource Recovery Association, a non-profit corporation to establish the *Maine Marketing Cooperative* to help municipalities market recyclable materials. The volume of materials individual communities generate does not hold much power in the global marketplace. By joining forces to market as one unit, Maine communities have found strength in both securing prices and services. The Maine Marketing Cooperative consists of 34 municipal recycling processing centers which, in turn, serve over 160 Maine cities and towns encompassing 35 percent of the state's population.

The Maine Marketing Cooperative researches markets to sell materials commonly found in residential and commercial waste streams at the best prices available nationally and often internationally. The cooperative provides members with market information, guidance on quality material



preparation, market development and research, and marketing of recyclables, as well as other services. Materials from various members are consolidated, processed (usually baled), and sold to end-users. By the end of June 1995, the Maine Marketing Cooperative will be marketing over 14,000 tons of materials

annually.

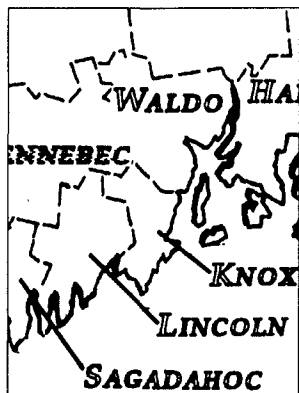
✓ Beginning in 1994, MWMA and Maine Resource Recovery Association initiated the annual *Maine Recyclathon* and Resource Recovery Conference combining recycling education and information exchange with an opportunity to recognize outstanding achievement.

Second Annual **Maine Recyclathon** *& Resource Recovery Conference*

✓ Throughout its six years, the MWMA also sponsored a variety of conferences, workshops and other education initiatives designed to expand public awareness of recycling and waste management issues and alternatives. For example, a 1993 Augusta Conference, *Going Beyond Flyers: The Next Step to Motivate the Public*, co-sponsored with the Maine Broadcasting System (MBS) introduced participants to innovative public education techniques, including the *Color Me Green* series of television public service announcements developed by MBS.

✓ Another such project is *Pathways to a Sustainable Future*, a model curriculum for students from kindergarten through high school. Designed by the environmental education experts at Maine's Chewonki Foundation, this program is a guide to action in which students learn firsthand about how consumption habits affect waste generation.

The Lincoln County Experience



In 1975, Lincoln county's commissioners set aside a small amount of federal money and earmarked it to address the county's solid waste management problems. New state laws had required several county towns to end the time-honored but environmentally reckless practice of open burning and to undertake costly new procedures like periodic covering. Without the volume reduction open burning provided, these sites were filling rapidly. While a county sanitary landfill appeared to be the most logical alternative, finding a site acceptable environmentally and to the county's residents seemed equally unlikely.

In the spring of 1976, county officials attended a workshop on solid waste management options, organized by the National Wildlife Federation (NWF) and co-sponsored by the Maine Audubon Society, Natural Resources Council of Maine and Maine Department of Environmental Protection. The program covered options ranging from waste reduction measures like the "bottle bill," then pending in the Maine legislature, to waste-to-energy, then being considered in the City of Auburn. In describing these, as well as both recycling and sanitary landfill methods, speakers emphasized the prudence of pursuing an integrated approach to waste management, in which recycling provides a valuable means to conserve costly landfill space.

After discussions with county officials, the NWF chose Lincoln County as the focus of a six-week program of meetings with local officials and the public in each of the county's 18 towns. Following this campaign, town and county officials determined that the most effective use of the funds available would be establishment of a county-wide recycling program.

The initial system, operational in 1978, consisted of recycling drop-off depots at each of the old dump sites in the county with a central storage and processing center located in Wiscasset. Throughout the 1980s, despite the volatile recyclables market of the period, the system grew and improved. Eventually, the towns assumed control over the program with additional sub-county hubs established in Boothbay, Nobleboro and Waldoboro.

Today, 20 years after the county commissioners took the first cautious steps into solid waste management, all of the former dumps in Lincoln County are long since closed. Fifteen of the county's towns had recycling rates greater than 35 percent, ten exceed 40 percent. The system has grown to include 28 municipalities, including 13 from other counties. With the addition of mixed paper, the system now recycles 12 different materials. And, in 1993, Lincoln County's Gerry Silva was named recycling manager of the year at the Maine Recyclathon.

Selected Maine Community Recycling Stories

① **Aroostook County** Successful regional efforts organized in the Presque Isle-Aroostook Valley and Fort Fairfield-Limestone-Caribou areas; innovative programs in backyard and potato composting and mobile shredding operation for pesticide containers

② **Bangor** Serves as a consolidation center working closely with private sector waste management enterprises; a leader in composting and creativity; "Bangor Beautiful" serves as a model of community involvement

③ **Brunswick** Maine's first curbside recycling collection program, in continuous operation since 1980; 1994 Recycling Recognition Award winner for most effective curbside program

④ **Coastal Recycling** One of the first regions formed Downeast, has grown to include eleven towns; pioneered small town collection and processing.

⑤ **Dover-Foxcroft** Winner "Community School Service" award, 1993 Maine Recycling Recognition awards

⑥ **Freeport** One of Maine's oldest community programs has become one of the state's most comprehensive and innovative; strong business waste recycling program.

⑦ **Howland Region** Already encompasses nine towns and still growing; winner 1994 outstanding volunteer committee, Maine Recycling Recognition awards

⑧ **Kittery** State-of-the-art facility with a creative approach to materials reuse, including eleven bulky waste items.

⑨ **Lewiston** Tackling innovative pick-up initiatives such as curbside collection of food waste for composting; pilot household hazardous

waste collection program.

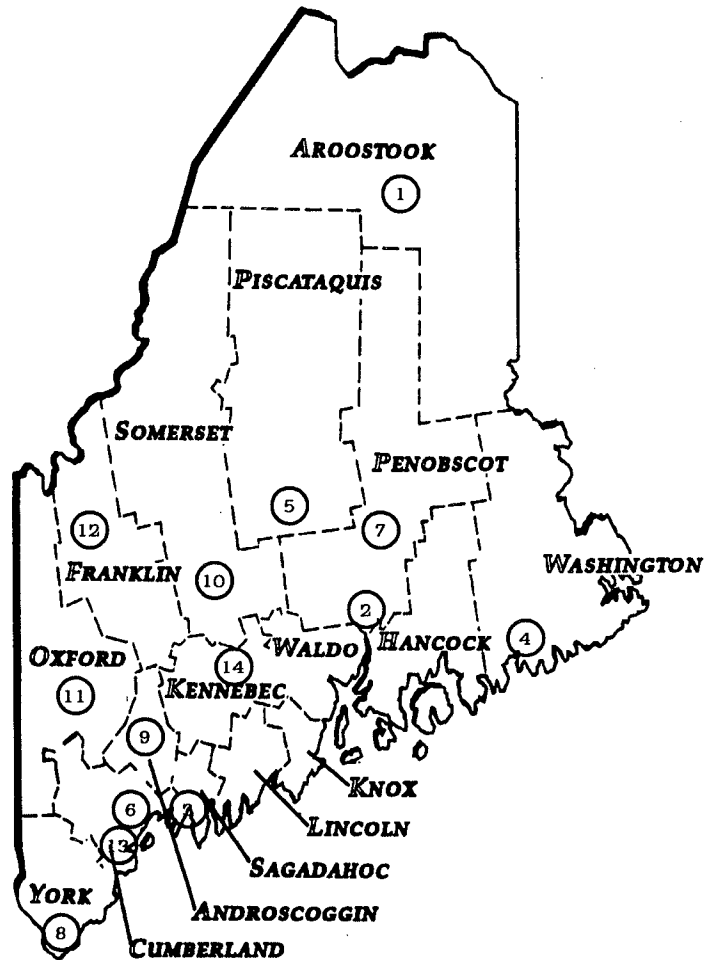
⑩ **Kennebec Valley Regional Waste Corporation** Operates a viable public rural curbside recycling collection program; overcame obstacles through creativity and dedication of local leaders

⑪ **Oxford County** Formed one of the largest regional programs in Maine; shredding and recycling magazines

⑫ **Rangely** A leader in business and school education; creative, active local committee

⑬ **South Portland** Devised creative program to recycle building shingles into asphalt.

⑭ **Waterville-Winslow** Region has expanded to include materials from the Augusta-Hatch Hill regional program; initiative; innovative use of disabled workers and sorting stations



During its six years, the MWMA administered five rounds of grants totalling \$13 million and providing assistance to over 350 Maine communities.

Recycling becomes BIG business in Maine



Gone are the days when recycling was strictly the domain of idealists, to whom the balance sheet was a secondary consideration, and tinkerers, eking out a marginal living on a ton of cardboard here, a truckload of glass there. In the 1990s, recycling in Maine came of age. In the process, thousands of Mainers found good jobs in the recycling business, recycling grew to a \$1.6 billion a year sector of the state's economy, and, a torrent of private investment in recycling enterprise has been unleashed. As we approach the 21st Century, recycling has become one of Maine's most promising growth industries.



JOBS

A 1993 MWMA-sponsored study demonstrated that recycling supported over 2,000 jobs during 1992, in the very depths of the recent recession. This same study projected that by 1995 recycling would be responsible for over 4,000 jobs.

A 1994 survey by the Northeast Recycling Council (NERC) identified over 8,100 recycling jobs in Maine, ranking Maine 4th in recycling jobs in the ten state region, behind only Pennsylvania, New York, and New Jersey and nearly tied with Massachusetts. Recycling now accounts for 8.3 percent of all Maine manufacturing jobs.

And, as the 1993 study documented, these are *quality*

jobs, averaging over \$20,000 in annual salary, compared, for example, to the \$11,500 year annual salary paid Mainers working in the retail trade sector.

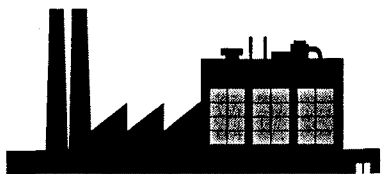


PROFITS

The 1993 MWMA study estimated that recycling added nearly \$300 million to Maine's economy in 1992 and could grow to \$500 million by 1995. The 1994 NERC study identified \$1.6 billion of value recycling adds annually to the Maine economy. *Paper recycling alone is now a billion dollar a year industry in Maine.*

And the growing demand for recycled materials has meant a major windfall to Maine recyclers. Market prices, relatively stable from 1990 through 1995, began to take off in 1994.

In January of 1995, prices for newsprint and cardboard exceeded \$100 per ton, clean office paper was bringing \$225 per ton, and high quality recycled HDPE plastic was worth over \$500 per ton.

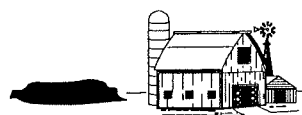


INVESTMENT

Perhaps the most telling testimonial to

recycling's maturity in Maine is the commitment entrepreneurs have made to invest in its future.

In May 1993, the Bowater Company opened its new, \$60 million plant in East Millinocket to recycle used newsprint, phone books and magazines. In Auburn, Stone & Webster Operating Corporation began construction in 1994 on a \$65 million facility to de-ink a wide variety of waste paper products to be sold as pulp to paper manufacturers.



COMPOSTING

Composting is recycling in its most basic, natural form. Composting separates certain organic components from the municipal solid waste stream, and then allows these materials to decompose, under controlled conditions including high temperature, to create a humus-like soil amendment material. There are both commercial (e.g., restaurant and grocery store food waste; wood in construction and demolition debris) and residential (household food and yard waste) sources of material appropriate for composting. In 1993, MWMA estimates that Maine generated almost 320,000 tons of compostable materials and composted just over 40,000 tons (12.5 percent), double the volume composted in 1991.

Data collected by MWMA in 1993 indicated that food waste alone comprises 25 percent of residential and 15 percent of commercial municipal solid waste in Maine. MWMA's 1993 *Maine Waste*

- ✓ food waste
- ✓ low grade mixed paper (food-contaminated boxboard, foreign cardboard)
- ✓ clean wood waste



Management and Recycling Plan recommended focusing composting efforts on the following source-separated organics:

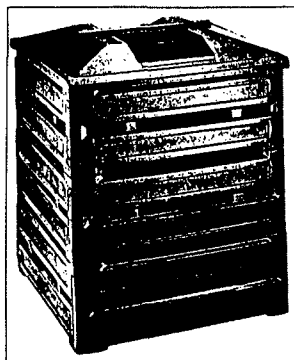
- ✓ yard and leaf waste

Since 1989, MWMA awarded over \$660,000 in grants to composting programs, fully six percent of the \$11 million of recycling assistance offered to municipalities.

Because the uses of and markets for composting remain limited, MWMA set reasonable goals to increase composting at a sustainable rate in the years ahead. For example, increasing the composting of food waste by 3-5 percent, primarily by encouraging households to include food wastes in their backyard composting, appears to be

both achievable and reasonable.

Beginning in 1993, MWMA, in cooperation with the University of Maine



Cooperative Extension Service, established a Master Composter Program to provide training and technical information on backyard composting to citizens. 371 "master composters" completed the program.

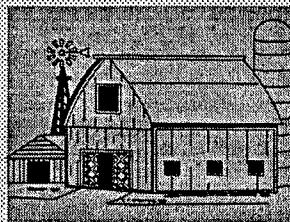
Many Maine municipalities, under an MWMA grant program, make containers like this available for residential composting

✓ To further promote

composting, representatives from the Maine Departments of Agriculture and Environmental Protection, MWMA and the Cooperative Extension formed the *Maine Compost Team*. The team has worked on a number of educational demonstration projects (see box, right),

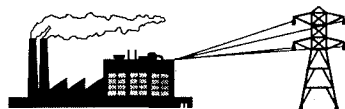
ranging from a school cafeteria food waste initiative in Wiscasset to a program to compost apple pomace in Monmouth.

Maine Wild Blueberry Company



In August 1993, the Maine Wild Blueberry Company in Machias initiated an innovative composting

program as an alternative to landfilling its blueberry waste. Designed with help from the Maine Compost Team, the project mixed the company's wastes (green and frozen berries, leaves and twigs) with wood ash, saw dust, horse bedding and fish waste from other locations in the Machias area. An open house introduced other area blueberry operators to the procedure.



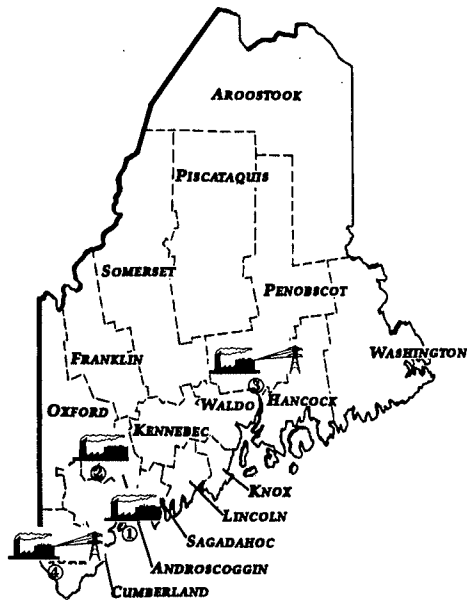
INCINERATION & WASTE-TO-ENERGY

Maine's waste management hierarchy recognizes that, even with maximum effort toward waste reduction, recycling and composting, half of Maine's municipal solid waste would still remain. Incineration affords the opportunity to dramatically reduce the volume of the remaining waste requiring costly and environmentally less desirable land disposal. In addition to the benefits from

volume reduction, waste-to-energy plants use the energy potential of the waste as a substitute for more costly alternatives.

In 1993, Maine's four major incineration and waste-to-energy plants processed nearly 490,000 tons of municipal solid waste, 38 percent of the total

generated and nearly 60 percent of all waste requiring disposal. Maine's incineration and waste-to-energy rate is more than double the national rate.



Maine's major incinerators and waste-to-energy plants:

Regional Waste Systems



Mid-Maine Waste Action Corporation



Penobscot Energy Recovery Corporation



Maine Energy Recovery Corporation



incineration only



incineration with waste to energy



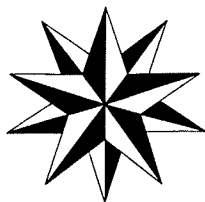
LAND DISPOSAL

Maine has reduced its dependence on land disposal from nearly 100 percent 20 years ago to 29 percent in 1994. From over 400 dumps in the early 1970s, most open-burning and many polluting surface and ground waters, Maine currently has only nine sanitary landfills, operating under the most stringent procedures. Maine's efforts at waste reduction, recycling, composting and incineration/ waste-to-energy have combined to give Maine a land disposal rate less than half the national rate of 62 percent.

While municipalities have increasingly turned to recycling and volume reduction, one area of disposal that has been a chronic problem for municipalities is bulky wastes- primarily construction and demolition debris and over-sized, bulky items. MWMA encouraged greater reuse, recycling and composting of these materials, and also worked with municipalities to minimize costs through separation and processing of these materials.

MWMA also aggressively pursued its assignment from the Legislature to identify and secure a landfill site for

special wastes, primarily sludge from paper making and municipal wastewater treatment plants. While encouraging the development of alternatives, most notably land spreading of municipal wastewater treatment plant biosolids, MWMA recognized the need to develop a state-of-the-art special waste landfill at Carpenter Ridge in Penobscot County. The State Planning Office is currently seeking the necessary permits for this facility from the Department of Environmental Protection, but has no plans to actually develop the facility until existing capacity is used and need warrants.



Future Direction

While the MWMA fulfilled its basic mission, solid waste management in Maine remains a priority of both state and local government, and some of the MWMA's functions will continue under the auspices of the Maine State Planning Office. In the future, five priority areas have been identified:

1) Municipal Technical Assistance

- ✓ *Project Coordination*
 - ☐ *Lewiston food waste pilot*
 - ☐ *Household Hazardous Waste pilot*
 - ☐ *Maine Marketing Cooperative*
 - ☐ *Maine Compost Team*
 - ☐ *other projects*
- ✓ *Outreach*
 - ☐ *regional workshops*
 - ☐ *Maine Recyclathon*
 - ☐ *operator forums*
 - ☐ *publications*

2) Data Collection/Management

- ✓ *Annual Municipal Reports*
- ✓ *Annual Report to Legislature*
- ✓ *State Waste Management and Recycling Plan*

3) Municipal Financial Assistance

- ✓ *Demonstration grants*

4) Business Assistance

- ✓ *Office paper recycling*
- ✓ *Liaison with Maine Chamber of Commerce and Industry (WasteCap)*
- ✓ *Certification (FAME loans, toxics in packaging exemptions)*

5) Special Waste Management Facility

- ✓ *Carpenter Ridge special waste management facility site permitting*
- ✓ *Evaluation of waste disposal policy in Maine*



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